



Attorney's Docket No. 40989/237225(9280-12)

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Stomp *et al.* Confirmation No.: 8799
Appl. No.: 09/915,873 Group Art Unit: 1638
Filed: July 26, 2001 Examiner: Georgia L. Helmer
For: EXPRESSION OF BIOLOGICALLY ACTIVE
POLYPEPTIDES IN DUCKWEED

MAIL STOP NON-FEE AMENDMENT
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

**COMMUNICATION REGARDING REQUIREMENTS FOR PATENT APPLICATIONS
CONTAINING NUCLEOTIDE SEQUENCE AND/OR
AMINO ACID SEQUENCE DISCLOSURES**

Sir:

In response to the Office Action of January 29, 2003, please replace the sequence listing and the computer-readable form as originally filed in the present application with the attached sequence listing and the substitute computer-readable form submitted concurrently herewith.

The sequence listing and computer-readable form as originally filed have been amended to include the sequences described on pages 25 and 26 of the specification as requested by the Examiner. It is submitted that the amendments, made in accordance with 37 C.F.R. §1.825(a), included in the substitute sheets of the sequence listing do not include new matter.

I hereby state that the substitute copy of the computer-readable form, submitted in accordance with 37 C.F.R. §1.825(b), is the same as the amended sequence listing.

Respectfully submitted,

Kathryn L. Coulter

Kathryn L. Coulter
Agent for Applicant
Registration No. 45,889

Customer No. 00826 ALSTON & BIRD LLP Bank of America Plaza 101 South Tryon Street, Suite 4000 Charlotte, NC 28280-4000 Tel Raleigh Office (919) 862-2200 Fax Raleigh Office (919) 862-2260	CERTIFICATE OF MAILING I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: MAIL STOP NON-FEE AMENDMENT, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 on April 29, 2003. <i>Nora C. Martinez</i> Nora C. Martinez
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SEQUENCE LISTING

<110> Stomp, Anne-Marie
Dickey, Lynn
Gasdaska, John

<120> Expression of Biologically Active
Polypeptides in Duckweed

<130> 40989/237225

<140> 09/915,873
<141> 2001-07-26

<150> US 60/293,330
<151> 2001-05-23

<150> US 60/221,705
<151> 2000-07-31

<160> 12

<170> FastSEQ for Windows Version 4.0

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<211> 554
<212> DNA
<213> Zea mays

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tgccgcagtg ggcgtgatct tggatgtctat cctgcaatcg tggtaactt atgtctttta 180
taccccttac taccatgaaa agactagtaa tctttctcgta tgtaacatcg tccagcactg 240
ctattaccgt gtggccatc cgacagtcg gctgaacaca tcatacgata ttgagcaaag 300
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ttctcggacg taaggccctt gctgctccac acatgtccat tcgaattttca ccgtgttttag 480
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ccgtgcagct gcgg 554

<210> 2
<211> 498
<212> DNA
<213> Artificial Sequence

<220>
<223> Duckweed codon optimized nucleotide sequence
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<221> CDS
<222> (1) ... (498)

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ctg ctg gcg cag atg cgc cgc atc tcg ctc ttc agc tgc ctg aag gac Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys Asp 20 25 30	96
cgc cac gac ttc ggc ttc ccg cag gag gag ttc ggc aac cag ttc cag Arg His Asp Phe Gly Phe Pro Gln Glu Phe Gly Asn Gln Phe Gln 35 40 45	144
aag gcc gag acg atc ccc gtg ctc cac gag atg atc cag cag atc ttc Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe 50 55 60	192
aac ctg ttc agc acc aag gac agc tcg gcc gcc tgg gac gag acc ctg Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu 65 70 75 80	240
ctc gac aag ttc tac acc gag ctg tac cag cag ctc aac gac ctg gag Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu 85 90 95	288
gcg tgc gtg atc cag ggg gtt ggg gtt acg gag acg ccg ctg atg aag Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met Lys 100 105 110	336
gag gac agc atc ctc gcc gtg cgc aag tac ttc cag cgc atc acg ctc Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu 115 120 125	384
tac ctc aag gag aag aag tac agc ccg tgc gcc tgg gag gtc gtt cgc Tyr Leu Lys Glu Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg 130 135 140	432
gcc gag atc atg cgc tcc ttc agc ctg agc acc aac ctc cag gag agc Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu Ser 145 150 155 160	480
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<212> PRT
<213> Homo sapiens

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Gly Ser Arg Arg Thr Leu Met Leu Leu Ala Gln Met Arg Arg Ile Ser
35 40 45
Leu Phe Ser Cys Leu Lys Asp Arg His Asp Phe Gly Phe Pro Gln Glu
50 55 60
Glu Phe Gly Asn Gln Phe Gln Lys Ala Glu Thr Ile Pro Val Leu His
65 70 75 80
Glu Met Ile Gln Gln Ile Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser
85 90 95
Ala Ala Trp Asp Glu Thr Leu Leu Asp Phe Tyr Thr Glu Leu Tyr
100 105 110
Gln Gln Leu Asn Asp Leu Glu Ala Cys Val Ile Gln Gly Val Gly Val
115 120 125
Thr Glu Thr Pro Leu Met Lys Glu Asp Ser Ile Leu Ala Val Arg Lys
130 135 140
Tyr Phe Gln Arg Ile Thr Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro
145 150 155 160
Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Phe Ser Leu
165 170 175
Ser Thr Asn Leu Gln Glu Ser Leu Arg Ser Lys Glu
180 185

<210> 5
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<212> PRT
<213> Homo sapiens

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Arg His Asp Phe Gly Phe Pro Gln Glu Phe Gly Asn Gln Phe Gln
35 40 45
Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile Phe
50 55 60
Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr Leu
65 70 75 80
Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu
85 90 95
Ala Cys Val Ile Gln Gly Val Val Thr Glu Thr Pro Leu Met Lys
100 105 110
Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr Leu
115 120 125
Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg
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145 150 155 160

Leu Arg Ser Lys Glu
165

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<212> PRT
<213> Oryza sativa

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<210> 7
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Modified rice alpha-amylase signal peptide

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<213> Arabidopsis thaliana

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<212> DNA
<213> Zea mays

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tgccgcagtgc ggcgtgatct tggatgttat cctgcaatcg tggtaactt atgtctttta 180
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ctattaccgt gtgggtccatc cgacagtgctg gctgaacaca tcatacgtata ttgagcaaag 300
atctatcttc cctgttctt aatgaaagac gtcattttca tcagtgatgt ctaagaatgt 360
tgcaacttgc aaggaggcgt ttctttctt gaatttaact aactcggtga gtggccctgt 420

ttctcgacg taaggcctt gctgctccac acatgtccat tcgaattta ccgtgttag 480
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<210> 10
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 cagcagatct tcaatctttt cagcacaaag gactcatctg ctgcttggga tgagacccttc 240
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 caggggggtgg gggtgacaga gactcccctg atgaaggagg actccattct ggctgtgagg 360
 aaatacttcc aaagaatcac tctctatctg aaagagaaga aatacagccc ttgtgcctgg 420
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 ttaagaagta aggaatga 498

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 <212> DNA
 <213> Homo sapiens

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 ctggcacaga tgaggagaat ctctcttttccctgcttg aggacagaca tgactttgg 180
 tttcccccagg aggagtttgg caaccatcc caaaaaggctg aaaccatccc tgccctccat 240
 gagatgatcc agcagatctt caatctttc agcacaagg actcatctgc tgcttggat 300
 gagaccctcc tagacaaattt ctacactgaa ctctaccagc agctgaatga ccttggaaagcc 360
 tgtgtgatac aggggggtgg ggtgacagag actcccctga tgaaggaggatccattctg 420
 gctgtgagga aatacttccaaagaatctact ctctatctgaa aagagaagaa atacagccct 480
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 caagaaagttaa ggaatgaaa 569

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 <212> DNA
 <213> Arabidopsis thaliana

<400> 12
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